

Notice of Allowability

Application No.

09/909,530

Examiner

Thomas E. Shortledge

Applicant(s)

HUMPHREYS ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 03/18/2005.
2. ☒ The allowed claim(s) is/are 6, 10, 11, 17, 21, 22, 27, 31, and 37.
3. ☒ The drawings filed on 24 January 2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

1. This action is responsive to communications: Remarks received 03/18/2005.
2. Claims 6, 10, 11, 17, 21, 22, 27, 31, and 32 are pending in this case. Claims 6, 10, 17, 21, 27, and 31 are independent.
3. The objection to claims 10, 11, 21, 22, 31, and 32 is removed in light of the applicant's amendment.
4. The 112 2nd paragraph rejection of claims 6, 17, and 27 is removed in light of the applicant's amendment.

Allowable Subject Matter

5. Claims 6, 10, 11, 17, 21, 22, 27, 31, and 32 are allowed.
6. The following is an examiner's statement of reasons for allowance.

Claims 6, 17, and 27 describe generating a sentence from a semantic representation comprising the steps of mapping the semantic representation to an unordered set of syntactic nodes, and creating a tree structure to order the syntactic nodes from a statistical goodness measure. Where the tree is created by first selecting a syntactic node to be a root node of the a new tree, identifying generation grammar rules that apply to a non-terminal leaf node at a current phrase level and the rules that

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apply to the non-terminal leaf node at a lower level which express the same semantic attributes as a rule at the current phrase level, generating syntactic substructures described by each applicable rule and determining a statistical goodness measure value for each substructure; and selecting the substructure with highest statistical goodness measure value to use to expand the tree. Finally generating the sentence from the tree structure.

The prior art of record teach generating sentences from grammars by applying generation rules for a current word obtained from a syntax tree to complete a word-for-word substitution of the word. However, the prior art does teach nor fairly suggest applying rules to a non-terminal leaf node at a lower phrase level, which express the same semantic attributes as a rule at the current phrase level.

Claims 10, 21 and 31 describe generating a sentence from a semantic representation, wherein in the act of selecting the substructure with the highest statistical goodness measure value to expand the tree, a copy of the current tree is created for each of the generated substructures at the current phrase level. Each of the substructures are then added to the copied tree, and then the statistical goodness measure of each substructure is combined with the overall score of the tree to which it is added.

The prior art of record teaches combining the score of each of the lower node within a created syntax tree to find the overall score of the tree. However, the prior art of record does not teach nor fairly suggest creating a copy of the current tree for each of

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the generated substructure at the current phrase level, nor adding each generated substructure to the created tree.

Dependent claims 11, 22, and 32 are allowed since they further limit each of the respective independent claims or their own parent claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas E. Shortledge whose telephone number is (571)272-7612. The examiner can normally be reached on M-F 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571)272-7602. The fax phone

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number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TS
06/10/2005



RICHEMOND DORVIL
SUPERVISORY PATENT EXAMINER